6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OAR-2013-0809; FRL-9905-43-OAR]

Notice of Availability of the Environmental Protection Agency's 2018 Emissions Modeling Platform

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of data availability (NODA).

SUMMARY: The Environmental Protection Agency (EPA) is providing notice that the 2018 Emissions Modeling Platform data are available for public review and comment. The 2018 Emissions Modeling Platform consists of emission inventory data, supporting data used to develop the 2018 emission inventories, and methods and data that are used to process emission inventories representing the year 2018 into a form that can be used for air quality modeling. The platform, or portions of the data that make up the platform, may be used by the Office of Air and Radiation in several contexts, including the development of rules related to the transport of air pollution and the National Ambient Air Quality Standards. The EPA is requesting comment on the 2018 Emissions Modeling Platform, including the emission inventories, the supporting data, and the methods used to develop and process the 2018 emission inventories. A docket has been established to facilitate public review of the data and to track comments.

DATES: Comments must be received on or before June 30, 2014. Please refer to **SUPPLEMENTARY INFORMATION** for additional information on submitting comments and on the provided data.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2013-0809, by one of the following methods:

- www.regulations.gov. Follow the on-line instructions for submitting comments.
- Fax: (202)566-9744. Attention Docket ID No. EPA-HQ-OAR-2013-0809.
- Mail: EPA Docket Center, WJC West (Air Docket), Attention Docket ID No. EPA-HQ-OAR-2013-0809, U.S. Environmental Protection Agency, Mailcode: 2822T, 1200 Pennsylvania Ave., NW, Washington, DC 20460. Please include a total of 2 copies.
- Hand Delivery: U.S. Environmental Protection Agency, WJC West (Air Docket), 1301 Constitution Avenue, NW, Room 3334, Washington, DC 20004, Attention Docket ID No. EPA-HQ-OAR-2013-0809. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA-HQ-OAR-2013-0809. The EPA's policy is that all comments received will be included in the public docket without change and may be

made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or email. The www.regulations.gov website is an "anonymous access" system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through www.regulations.gov, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at http://www.epa.gov/epahome/dockets.htm.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Air and Radiation Docket and Information Center, EPA/DC, WJC West Building Room 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For questions on the 2018 Emissions Modeling Platform and on how to submit comments, contact Alison Eyth, Air Quality Assessment Division, Environmental Protection Agency, C339-02, 109 T.W. Alexander Drive, Research Triangle Park, NC 27709; telephone number: (919)541-2478; fax number: (919)541-0684; email address: eyth.alison@epa.gov.

SUPPLEMENTARY INFORMATION:

The EPA is requesting comment on the 2018 platform emission inventories; supporting ancillary files used to allocate

emissions temporally, spatially, and by species; and on the emissions modeling methods used to develop the 2018 emission inventories, including but not restricted to, the projection, control and closure data, activity data, and model input databases used to develop projected emission levels in 2018. Summaries of the emission inventories and data are provided to aid in the review of the data, but comments are sought on the actual inventories, model inputs, and data used to develop the projected 2018 emissions.

I. Additional Information on Submitting Comments

A. What should I consider as I prepare my comments for EPA?

1. Submitting CBI. Do not submit this information to the EPA through EDOCKET, www.regulations.gov, or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD-ROM that you mail to the EPA docket office specified in the Instructions, mark the outside of the disk or CD-ROM as CBI and then identify electronically within the disk or CD-ROM the specific information that is claimed as CBI. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket.

2. Tips for preparing your comments. When submitting comments, remember to:

i. Identify the notification by docket number and other identifying information (subject heading, Federal Register date and page number).

ii. Explain your comments, why you agree or disagree; suggest alternatives and substitute data that reflect your requested changes.

iii. Describe any assumptions and provide any technical information and/or data that you used.

iv. Provide specific examples to illustrate your concerns, and suggest alternatives.

v. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

vi. Make sure to submit your comments by the comment period deadline identified.

B. Instructions for Submitting Comments and Alternative Data

The EPA can most effectively use comments on data that provide specific alternative values to those in the EPA data sets, and for which accompanying documentation supports the alternative values. Commenters should provide the alternative data at a level of detail appropriate to the data set into which it will be incorporated, thereby including all key fields needed to substitute the old data with the new. For example, any data

provided as an alternative to EPA's point source emissions data should include all key fields used to identify point source data such as facility, unit, release point, process, and pollutant, along with alternative emissions values. If a commenter were to provide a new set of county total emissions as an alternative to detailed point source emissions data, the EPA would be unable to use the new data. Commenters should also include documentation that describes methods for development of any alternative values and relevant references supporting the alternative approach.

Any alternative emission inventory or ancillary data provided should be compatible with the formats used by the Sparse Matrix Operator Kernel Emissions (SMOKE) modeling system version 3.5.1, which is used by the EPA to process emission inventories into a format that can be used for air quality modeling. Formats are defined in the SMOKE Version 3.5.1 User's Manual available from http://www.smoke-model.org. Only the rows of data that have changed from those provided by the EPA should be included in the alternative data sets. Alternative data that are not an input to SMOKE, such as model input databases for mobile source models, should be provided in a format in which it could be directly input to the model.

To comment on inventory projection methods, submit comments to the docket that describe an alternative approach to the existing methods, along with documentation describing why that

method is an improvement over the existing method.

II. Information Available for Public Comment

The 2018 Emissions Modeling Platform consists of emission inventories that represent projected emissions into the atmosphere of criteria and some hazardous air pollutants in the year 2018, additional ancillary data files that are used to convert the National Emissions Inventory (NEI) emissions into a form that can be used for air quality modeling, and methods used to prepare the air quality model inputs and to develop projections of emissions in the year 2018. The platform includes emission inventories for sources at specific locations called point sources; emissions from fire events; and county-level emissions of onroad mobile sources, nonroad mobile sources, and other nonpoint sources.

In the modeling platform, emission sources are split into categories called modeling sectors. For example, location-specific point emission sources are split into peaking electric generating units (EGUs), other EGUs, oil and gas point sources, and other point sources. Nonpoint emission sources are split into agricultural ammonia sources, residential wood sources, oil and gas nonpoint sources, and other nonpoint sources.

The 2018 emissions modeling platform is named for the year of the data that it represents. The emission inventories in the 2018 modeling platform have been developed using projection

methods that are specific to the type of emission source. Emission projections for EGUs for 2018 are developed using the Integrated Planning Model (IPM), which is further described below. Most non-EGU source emissions are projected based on the EPA's 2011 emissions modeling platform, which the EPA has also made available for public comment under a November 27, 2013, Federal Register notice titled 2011 Emissions Modeling Platform; Availability. The relevant 2011 data files are available in docket number EPA-HQ-OAR-2013-0743. Future emissions are projected from this base case either by running models to estimate emissions in the future year (i.e., EGUs, and onroad and nonroad mobile sources), or by adjusting the base year emissions according to the best estimate of changes expected to occur in the intervening years (i.e., non-EGU point and nonpoint sources).

For some sectors, the same emissions are used in the base and future years, such as biogenic emissions, point source fire emissions, and Canadian emissions. For all other sectors, rules and specific legal obligations that go into effect in the intervening years, along with changes in activity for the sector, are considered when possible. Documentation of the methods used for each sector is provided in the Technical Support Document Preparation of Emissions Inventories for the Version 6.0, 2011 Emissions Modeling Platform, which can be

found in the docket for this notice.

In order to project future EGU emissions, the EPA uses the IPM. The National Electric Energy Data System (NEEDS) database contains the generation unit records used for the model plants that represent existing and planned/committed units in the EPA modeling applications of IPM. NEEDS includes basic geographic, operating, air emissions, and other data on these generating units and was completely updated for the EPA's new power sector modeling platform. The EGU emission projections included in this 2018 emissions modeling platform are reported in an air quality modeling-ready flat file taken from EPA Base Case v.5.13, developed using IPM. 2018 EGU emission projections in the flat file format, the corresponding NEEDS database, and user guides and documentation are available in the docket for this notice, and they are also available on the Internet at http://www.epa.gov/powersectormodeling.

To project future emissions from onroad and nonroad mobile sources, the EPA uses MOVES and the National Mobile Inventory Model (NMIM), respectively. The 2018 projections were obtained by running these models to represent the year 2018 using year-specific information about fuel mixtures, activity data, and the impacts of national and state-level rules and control programs. The mobile model input databases and future year activity data are provided at

http://www.epa.gov/ttn/chief/emch/index.html#2011.

For non-EGU point and nonpoint sources, projections of 2018 emissions are developed by starting with the emissions inventories in the 2011 emissions modeling platform and applying adjustments that represent the impact of rules coming into effect in the years 2012 through 2018, along with the impacts of planned shutdowns, the construction of new plants, specific information provided by states, and specific legal obligations, such as consent decrees resolving alleged environmental violations. Changes in activity are considered for sectors such as oil and gas, residential wood combustion, cement kilns, livestock, aircraft, commercial marine vessels and trains. Data files used to represent the changes due to national, state and local rules as well as other specific legal obligations, are provided along with summaries that quantify the emission changes resulting from each program at a state and national-level.

The 2018 Emissions Modeling Platform also includes 2006 emissions inventories for Canada and projected 2018 emissions inventories for Mexico, along with ancillary data files used to allocate annual emissions to the hourly, gridded emissions of chemical species used by an air quality model (AQM). The types of ancillary data files include temporal profiles that allocate annual and monthly emissions down to days and hours, spatial surrogates that allocate county-level emissions onto the grid

cells used by an AQM, and speciation profiles that allocate the pollutants in the NEI to the chemical species used by an AQM. In addition, there are temporal, spatial, and speciation cross-reference files that map the emission sources in the emission inventories to the appropriate profiles based on their location, emissions source classification code (SCC), and in some cases the specific facility or unit. With the exception of some speciation profiles, the ancillary data files are unchanged from the data files associated with the 2011 emissions modeling platform. The EPA provided an opportunity for comment on the data files for the 2011 platform in a notice published on November 27, 2013, and those files are available in docket number EPA-HQ-OAR-2013-0743.

The 2018 emissions modeling platform, or portions of the data that make up the platform, may be used by the Office of Air and Radiation in several contexts including the development of rules related to the transport of air pollution and the National Ambient Air Quality Standards. Air quality modeling results that are based on the outputs of the emissions modeling platform are typically used in support of Regulatory Impact Analyses (RIAs) and sometimes support other aspects of rulemaking efforts.

The EPA has placed key information related to the 2018 Emissions Modeling Platform into the electronic docket available at www.regulations.gov. However, many of the detailed data files

are too large to be directly uploaded into the electronic docket and/or are not in formats accepted by that docket. Therefore, the information placed in the electronic docket, associated detailed data, and summaries to help with interpretation of the data are available for public review on the EPA's Clearinghouse for Inventories and Emissions Factors (CHIEF) website at http://www.epa.gov/ttn/chief/emch/index.html#2011.

The emissions inventories, along with many of the ancillary files, are provided in the form of flat files that can be input to SMOKE. Flat files are comma-separated value style text files with columns and rows that can be loaded into spreadsheet or database software. The columns of interest in the emission inventory files are specified in each subsection below. The EPA requests comment on the following components of the 2018 emissions modeling platform data:

- Emissions values and supporting data for EGUs. The EPA requests comment on the IPM version 5.13 input assumptions, NEEDS database, 2018 unit-level parsed files, 2018 flat file inputs and outputs, and cross references and matching between IPM and NEI. The EPA also requests comment on the specific units that are expected to be used as peaking units in the future year and on the nature of the expected 2018 emissions from those units.
- Emission values for non-EGU sources. The EPA requests

comment on the criteria air pollutant (CAP) 2018 emission projections in the modeling inventories, with the focus on ozone and particulate matter precursors such as nitrogen oxides (NO_x), sulfur dioxide (SO_2), particulate matter less than 2.5 micrometers ($PM_{2.5}$), particulate matter less than 10 micrometers (PM_{10}), volatile organic compounds (VOC), and ammonia (NH_3). The EPA will also accept comments on 2018 projections of hazardous air pollutants (HAPs), as they are included in the outputs of models used to develop 2018 emission projections, but HAPs are not the focus of this effort. The annual emissions values are located in the ANN_VALUE column of emission inventory files in the Flat File 2010 (FF10) format. Some emission inventories (e.g., nonroad) may also have values filled in to the monthly value columns (e.g., JAN_VALUE, FEB_VALUE, …, DEC_VALUE). The EPA requests comment on both the annual and monthly emissions values, where applicable. Summaries of emissions by state and county are provided to aid in the review of emissions values.

- Model inputs and activity data used to develop mobile source emission inventories. The EPA requests comment on the mobile source model input data used to develop the projected future mobile source emission inventories. These include both the databases used to create emission factors and the vehicle miles traveled and vehicle population activity data used to compute the emissions. Of particular interest are county total vehicle

miles traveled, the mixture of vehicle types in 2018, and changes to the inspection and maintenance programs. Alternative activity data may be provided in the form of MOVES county databases or in SMOKE FF10 activity data format.

- Projection data and methods. The EPA seeks comment on the data used to project point and nonpoint source emissions from 2011 to 2018, and on the methods and assumptions used to implement the projections. In this context, nonpoint source emissions are inclusive of commercial marine vessel, railroad, and other nonpoint emissions. In particular, the EPA seeks comment on its assumptions regarding the manner in which specific consent decrees and state- or locality-specific control programs will be implemented. Summaries are provided to illustrate the EPA's current assumptions regarding the implementation of consent decrees and other programs.

- Existing control techniques. The emission inventories include information on emissions control techniques listed in terms of control codes submitted to the EIS. These are listed in the CONTROL_IDS and CONTROL_MEASURES columns in the emission inventory flat files, with levels of reduction in the ANN_PCT_RED column. Projection of non-EGU point source emissions to future years is dependent on this information. The EPA seeks comment on whether information on existing controls given in the inventory flat files is incomplete or erroneous. The flat files

must be consulted for details of control techniques by pollutant.

- Emissions modeling methods. The EPA is using the SMOKE version 3.5.1 to prepare data for air quality modeling. The EPA requests comment on the methods by which SMOKE is used to develop air quality model-ready emissions, as illustrated in the scripts provided with the modeling platform and as described in the Technical Support Document Preparation of Emissions Inventories for the Version 6.0, 2011 Emissions Modeling Platform.

- Temporal allocation. Annual emission inventories must be allocated to hourly values prior to air quality modeling. This may be done with temporal profiles in several steps, such as annual-to-month, month-to-day, and day-to-hour. The exact method used depends on the type of emissions being processed. The EPA seeks comment on the allocation of the emission inventories to month, day, and hour for all types of emission processes. In particular, the EPA seeks information that could help improve the temporal allocation in 2018 of emissions from EGUs, nonroad mobile sources, residential wood combustion sources, and the temporal allocation of vehicle miles traveled needed to model onroad sources. The EPA seeks local- and region-specific data that can be used to improve the temporal allocation of emissions data.

- Spatial surrogates. Spatial surrogates are used to allocate county-level emissions to the grid cells used for air quality modeling. The EPA requests comment on the spatial surrogates used in the 2018 Emissions Modeling Platform. The same spatial surrogates are used in the base and future years.
- Chemical speciation. Prior to air quality modeling, the pollutants in the emission inventories must be converted into the chemical species used by the air quality model using speciation profiles. The speciation profiles in the 2018 emissions modeling platform are consistent with version 4.3 of the SPECIATE database. The EPA requests comment on the speciation profiles used in the 2018 modeling platform, as well as any information that could help improve the speciation of oil and gas emissions in both the eastern and western United States in 2018. Oil and gas speciation information, along with VOC to TOG adjustment factors that are used to compute methane emissions, would be of the most use at the county or oil/gas basin level of detail and also for each distinct process at oil and gas drilling/production facilities (e.g., glycol dehydrators).

To aid in the interpretation of the provided data files and how they relate to the aspects of the data on which the EPA is requesting comment, the EPA has provided in the docket a document describing the information included in the data files.

Dated: January 8, 2014.

Mary E. Henigin, Director,
Office of Air Quality Planning and Standards.

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